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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,448	01/04/2006	Mamadou Dicko	4590-463	8086

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LOWE HAUPTMAN & BERNER, LLP
1700 DIAGONAL ROAD, SUITE 300
ALEXANDRIA, VA 22314

EXAMINER

GIBSON, RANDY W

ART UNIT	PAPER NUMBER
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2841

MAIL DATE	DELIVERY MODE
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01/18/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/563,448

Applicant(s)

DICKO, MAMADOU

Examiner

Randy W. Gibson

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 02 July 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the resonant detection circuit must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muhs et al in view of Jarder et al, Ono et al, and Holm. Muhs discloses the claimed invention except he does not show the specific type of pressure sensor used, or the resonant detection circuit. Muhs uses a fiber optic pressure sensor instead of an electromagnetic loop. However, Jardar shows that this type of sensor is a functional equivalent of the fiber optic pressure sensor, and it would have been obvious to substitute one for the other motivated by their know suitability for their intended use. See *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988); and, *MPEP* § 2144.07.

From basic physics, "resonance" occurs when a device oscillates, or vibrates, at a frequency that is near the frequency that a system naturally wants to vibrate at; this causes the system in question to act like a natural amplifier of the waveform in question. In electrical circuits, it is the electrical signal that is the "wave" that travels down the

electrical circuit path. In electrical terms, "resonance" occurs whenever two electrical devices, or circuits, are matched so that maximum power is transferred from one to the other with minimum parasitic power loss. If the ordinary practitioner was trying to transfer a signal from an electrical device, such as a sensor, for example, to another electrical device, such as a signal detection circuit, then obviously the ordinary practitioner would want to do so at maximum efficiency with the least amount of distortion; otherwise, weak signals would be lost or hopelessly garbled. It is known from basic physics that maximum power transfer occurs between two electrical devices when the Thévenin equivalent impedance of one device is the mathematical conjugate of the other (*The Electrical Engineering Handbook*, Richard C. Dorf, Ed., CRC Press, Inc., Boca Raton, Florida, © 2000, p.85). In layperson's terms, an inductive load must be matched with a capacitive driver circuit, and vice versa, for maximum efficiency, since the impedance of inductors and the impedance of capacitors are mathematical conjugates of each other. If the two are matched, then the capacitor is absorbing power (charging) exactly when the inductor is discharging its stored power, so they complement each other instead of fighting each other by creating unwanted reflections of the AC wave (usually attributed to backflow of current through the circuit.). Jarde does not say much about his detection circuit, other than to say that it may include an oscillator that detects a change in the "inductance" of the sensor whenever a mechanical load passes over it (Col. 2, lines 12-35; Col. 3, lines 10-21). Since the sensor (load) is an inductor, then the detection circuit must have a Thévenin equivalent impedance that is capacitive. This calculation is elementary to any Electrical Engineering student, and certainly would

have been obvious to the ordinary practitioner. If the detection circuit was not in resonance with the sensor loop, then the device disclosed would work poorly, and would be impractical. Besides, applicant says very little about his own detection circuit in his specification, raising the presumption that what is not disclosed must be conventional. If not inherently so already, it would have been obvious to the ordinary practitioner to tune the detection circuit shown by Jardeur so that it was in resonance with the sensor.

Although Jardeur uses some type of counter in his preferred embodiment to detect changes in inductance, it is known to use a peak detection circuit for the same, as shown by Ono et al, and it would have been obvious to the ordinary practitioner to substitute one circuit for the other motivated by their art recognized functional equivalence.

As for the claimed limitation of using this peak value to determine weight, this is a known way to measure weight of a moving object, as shown by Holm, and it would have been obvious to the ordinary practitioner motivated by its known suitability for its intended use.

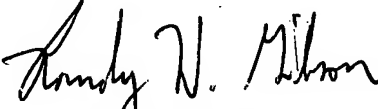
As for the claimed limitation of detecting vehicle speed, Muhs already shows how to do this using multiple sensors, which seems to be identical to the method that applicant discloses in his specification.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy W. Gibson whose telephone number is (571) 272-2103. The examiner can normally be reached on Mon-Fri., 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Randy W. Gibson
Primary Examiner
Art Unit 2841